

**HLI Summer Quarterly
Meeting
June 19th 2023
9-10:15 am**



Land Acknowledgement

Acknowledge that **we are gathered on the traditional, ancestral and unceded territory of** the Coast Salish peoples—Sk̓wx̓wú7mesh (Squamish), Stó:lō and Səlílwətaʔ/Selilwítlh (Tseil-Waututh) and xʷməθkʷəy̓əm (Musqueam) Nations

If anyone on zoom would like to acknowledge an additional territory they are joining us from, please add it to the chat.

**Adoption of Minutes
from March 13th 2023
Quarterly Meeting**

Adopted by Drs Jordan Guenette and Ying Wang





Quarterly Meeting 9:00 – 10:15 am
Hybrid – in person and zoom – June 19th, 2023

Adoption of Minutes from Mar 13th 2023

Director's Update

Dr. Don Sin

Centre News

Dr. Jordan Guenette

Strategic Plan – Progress to Date

Operational Updates

Tracy Yang

Finance Update

Claire Smits

Operations Update

Ivan Leversage

Health & Safety, Education and Events

Dr. Ying Wang

Bruce McManus Cardio Biobank Update

Naomi Potter

HLI Trainee Association

Aileen Hsieh

EDI Committee News

Dr. Vivienne Chen

Grants and Award Successes

Dr. Don Sin

Team Player of the Quarter Award

Director's Update

2022 ANNUAL REPORT



Centre for
Heart Lung Innovation
UBC and St. Paul's Hospital

Exceptional care through
exceptional science in heart, lung
and blood vessel diseases



Established in 1977 by Drs. James Hogg and Peter Paré, the HLI is a University of British Columbia Senate-approved research centre located within St. Paul's Hospital in downtown Vancouver.

The Centre is now led by Dr. Don Sin (Director) and Dr. Jordan Guenette (Associate Director).



68 Principal Investigators and
Affiliated Investigators

37 Research Associates and
Postdoctoral Fellows

55 Graduate Students

53 Undergraduate Students

6 Visiting Scientists

53 Support, Operations, and
Administrative Staff



>50,000 ft²
laboratory and office space

9 Core Facilities

Cardiovascular and Lung Tissue
Biobanks
Cellular Imaging and Biophysics
Histology
Molecular Phenotyping
Tissue Culture
Pre-clinical Services
Digital Slide Scanning and Imaging
Magnetic Resonance Imaging
Freezer Program



>\$14.6 M
in external funding*

\$9.9 M
Peer-Reviewed Grants

\$2.0 M
Clinical Trials

\$1.2 M
Contracts and Agreements

\$1.5 M
Salary Awards

*April 2022 to March 2023. Details in [Appendix A](#). Total funding held at HLI: \$7.5M.



In 2022,

HLI PIs published

345 Peer-reviewed journal articles, together receiving

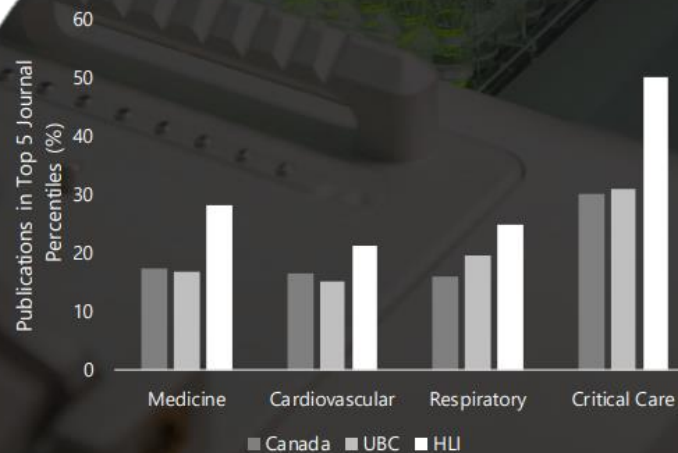
1,247 Citations

In 2022, HLI researchers published more frequently in top journals compared to UBC and Canadian researchers, and are cited

2.16 times more than the average paper in the field.*

High-impact publications in 2022

Lancet
Lancet Respiratory Medicine
New England Journal of Medicine
American Journal of Respiratory and Critical Care Medicine
JAMA Cardiology
JAMA Internal Medicine
European Respiratory Journal
European Heart Journal
Circulation
Journal of Allergy and Clinical Immunology



*Data obtained from SciVal. Comparisons were made using Field Weighted Citation Impact. A full list of publications can be found in [Appendix B](#).

"The knowledge and the fundamental technologies that we will develop during the project period [will] allow Canadians to reach a better health, reduce health-care costs associated with quality management, as well as reduce the overcrowding of hospitals, which we have seen during the COVID 19 pandemic."



Infrastructure for AI-integrated Point of Care Ultrasound Imaging for Decentralized Healthcare

Dr. Ilker Hacihaliloglu



Spatial characterization of human atherosclerotic disease for therapeutic and biomarker development

Dr. Ying Wang



Optical Coherence Tomography to Phenotype Small Airways in Chronic Obstructive Pulmonary Disease

Dr. Janice Leung



Spatial Single Cell Imaging in the Lung

Dr. Tillie Hackett

Dr. Jordan Guenette
HLI Strategic Plan Update



Strategic Plan Implementation Committees



	Research	Education	KT
Chairs	Jordan Guenette	Scott Tebbutt	Stephani Sellers
Trainees	Maria Elishaev Rishika Daswani	Katrina Besler Eric Xiang	Aileen Hsieh Naomi Potter
PIs	Chris Ryerson Tillie Hackett	Amrit Singh Honglin Luo	Janice Leung Zach Laksman
Staff	Beth Whalen Vivienne Chan	Ivan Leversage Firoozeh Gerayeli	Kasia Adolphs Gurpreet Singhera Tony Guo
Other	Josephine Jung Arianne Brown Claire Smits Kelly Ceron Basak Sahin		



RESEARCH

TRAINING AND EDUCATION

KNOWLEDGE TRANSLATION AND MOBILIZATION

YEAR 1 PRIORITY WORK in 2023

- Create a map diagram that links roles to funding to understand which roles are at risk.
- Develop initiatives to support PI retention.
- Prospectively plan the upcoming move to the new St. Paul's campus.
- Develop a prioritized list of expanded services and infrastructure needed to support research programs.
- Establish a research chair and/or faculty position for Indigenous heart and/or lung health.
- Partner with other departments and research centres that are engaging in Indigenous research.

- Identify resources to address EDI needs.
- Develop a sustainable HLI Trainee Association funding (e.g. develop budget).
- Create mechanisms for trainees to collaborate. (e.g. develop online toolkit).
- Increase trainee exposure to other PIs at HLI (e.g. hosting an Open Lab Day/Week).

- Visit other research programs with best patient engagement practices to learn best practices.
- Identify if there are opportunities to partner with the Core Area Education Strategic Committee and/or the TEE Committee before creating a knowledge translation (KT) committee.
- Work with UBC's Knowledge Exchange Unit to develop a set of modular training materials.



RESEARCH

Goal: Attract and retain top research talent in key areas of heart and lung research

- **Action:** Create a map diagram that links roles to funding to understand which roles are at risk
 - *HR and Finance updating (end of summer)*
- **Action:** Develop initiatives to support PI retention
 - *Director working with individual PIs to address salary gaps*
 - *Mentorship – Verified all junior PIs have formal mentors*



RESEARCH

Goal: Support research excellence by ensuring that the physical, virtual and computational environment meets the diverse research needs of the Centre

- **Action:** Prospectively plan the upcoming move to the new St. Paul's campus to mitigate interruptions to research productivity
 - *Townhall planned for tomorrow 10:15am*
- **Action:** Work with the CSRC relocation team to gather insight from other research centres that have moved from older to newer facilities to understand challenges and lessons learned
 - *Ongoing*
- **Action:** Develop a prioritized list of expanded services and infrastructure needed to support research programs at HLI
 - *Ongoing*



RESEARCH

Goal: Explore and develop partnerships with Indigenous and marginalized communities to address heart and lung health issues in vulnerable populations.

- **Action:** Establish a research chair and/or faculty position for Indigenous heart and/or lung health
 - *Initiated discussions with partner organizations*
- **Action:** Support initiatives for grant applications with a focus on heart and lung health in marginalized communities
 - *Grants team to begin this summer*



HLI Operational Updates



OPERATING REVENUE

April 2022 – March 2023

	Budget	Received	Remaining Balance
Infrastructure personnel	\$951,643	\$951,643	\$0
Registries Infrastructure personnel	\$553,840	\$553,840	\$0
3% Cost Sharing*	\$130,000	\$85,931	(\$44,069)
Research Support Funding (Indirects) – Tri Council Grants**	\$256,478	\$256,478	\$0
Overhead – Non Tri Council Grants***	\$100,000	\$86,547	(\$13,453)
TOTAL	\$1,991,961	\$1,934,439	(\$57,522)



OPERATING EXPENSES

April 2022 – March 2023

Equipment & Facilities	Carry-Forward	Budget	Expenses	Remaining Balance
General Repair and Maintenance	\$0	\$45,000	\$39,159	\$5,841
Miscellaneous Equipment	\$0	\$22,000	\$19,800	\$2,200
Service Contracts - Other	\$0	\$50,000	\$28,463	\$21,537
Tissue Culture	\$0	\$31,000	\$14,233	\$16,767*



OPERATING EXPENSES

April 2022 – March 2023

Computing	Carry-Forward	Budget	Expenses	Remaining Balance
Server Room Hardware and Maintenance	\$0	\$55,000	\$124,881	(\$69,811)*
Server Software	\$0	\$30,000	\$77,949	(47,949)*
Workstation Software	\$0	\$40,000	\$35,082	\$4,918
Supplies	\$0	\$20,000	\$13,666	\$6,334
IT/Equipment Contingency	\$130,000	\$0	\$0	\$130,000*
Computing	\$0	\$15,000	\$0	\$15,000



OPERATING EXPENSES

April 2022 – March 2023

	Carry-Forward	Budget	Expenses	Remaining Balance
Imaging	\$3,770	\$0	\$452	\$3,318
Courier	\$0	\$4,000	\$2,664	\$1,336
Telephone/Fax Expenses	\$0	\$2,000	\$1,674	\$326
Laundry	\$0	\$500	\$0	\$500
Seminar Series	\$0	\$10,000	\$16,793	(\$6,793)
Education/T&E	\$0	\$4,500	\$2,558	\$1,942
Trainee Association*	\$0	\$3,000	\$1,803	\$1,197
Infrastructure Training	\$0	\$3,000	\$1,621	\$1,379
Clinical Research Core**	\$0	\$65,000	\$0	\$65,000



OPERATING EXPENSES

April 2022 – March 2023

	Carry-Forward	Budget	Expenses	Remaining Balance
Administrative Costs	\$0	\$45,000	\$26,490	\$18,510
Infrastructure Salary Account*	\$0	\$85,000	\$77,976	\$7,024



OPERATING EXPENSES

April 2022 – March 2023

Operating	Actual
Revenue (Cost Sharing, ICR, OH)	\$428,956
Less: Expenses	\$486,822
Deficit	(\$57,926)



Core Facilities

April 2022 – March 2023

	Carry-Forward	Revenue (Actual)	Expenses (Actual)	March Revenue	March Pending Expenses	Projected Balance
Molecular Phenotyping	\$24,379	\$104,284	\$74,631	\$6,111	\$9,976	\$50,166
Cellular Imaging**	\$84,863	\$114,969	\$12,431	\$3,338	\$5,860	\$184,878
Cell Culture	(\$2,624)	\$16,760	\$9,946	\$2,105	\$3,220	\$3,074
Histology	\$37,791	\$54,660	\$59,957	\$4,930	\$6,364	\$31,061
MRI Core*	\$76,745	\$260,270	\$44,973	\$14,440	\$196,729	\$109,753
Freezer Core***	\$0	\$78,737	\$3,738	\$0	\$552	\$74,447



Core Facilities

April 2022 – March 2023

	Carry-Forward	Revenue (Actual)	Expenses (Actual)	March Revenue	March Pending Expenses	Projected Balance
Imaging	\$42,710	\$28,128	\$60,347	\$2,574		\$13,066
Computing	\$132,739	\$264,672	\$238,882	\$101,072		\$259,601
GEM	\$217,494	\$320,113	\$258,213	\$20,931	\$60,000	\$303,326



Human Resources

New Faces is back and we hope you enjoy reading these introductions and fun facts about new staff and students to the HLI.

If you have any exciting news or milestones to share with the Centre please let HR know so we can include these in our updates.



Recruitment

Please be sure to keep HR updated with any of your recruitment plans or invites you may have made with out Kelly and Chris' assistance as far in advance as possible.

It is important that know about everyone on site
If you are unsure please reach out to one of us.
It also allows us to be prepared for their arrival.



Training and Equipment Use at HLI

- Increase in misuse and breakage of centre equipment resulting in costly repairs.
- These observations were particularly noted in some of our shared Tissue Culture rooms.
- To correct this we improved communication and retraining with TC users.
- If something malfunctions or breaks, STOP and let your lab manager or core manager know.



Tissue Culture training update

- Teddy, Gurpreet and Claire have updated TC SOP's, added new forms.
- Sent SOP's and reviewed in person with users
- Mandatory hands on training for all (new and experienced) Jun 19-30th.
- Monitoring users, training records checks, this will be done by the TC Manager ongoingly



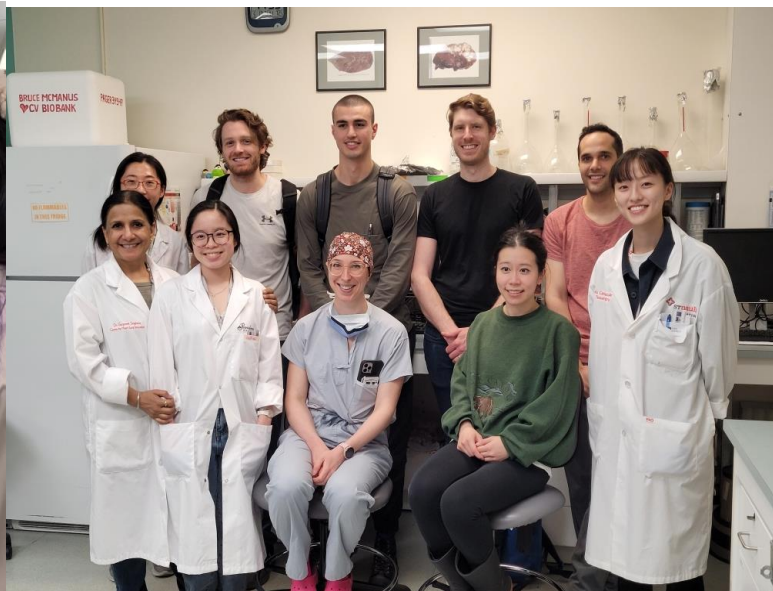
CSRC

- Town hall tomorrow 10:15-1100 am
- Equipment wish lists – approaching ‘end of life’ in next 5 years, email : preferred vendor, equipment model, ball park price to CS.
- Gap equipment – affected by CSRC delay
- **Strategic Plan Goal: Develop a prioritized list of expanded services and infrastructure needed to support research programs.**



SPH Cardiac Surgical Residents Tour

- Dr. Jamil Bashir, Program Director, Cardiac Surgery Undergraduate Education Program
- Biannual tour event

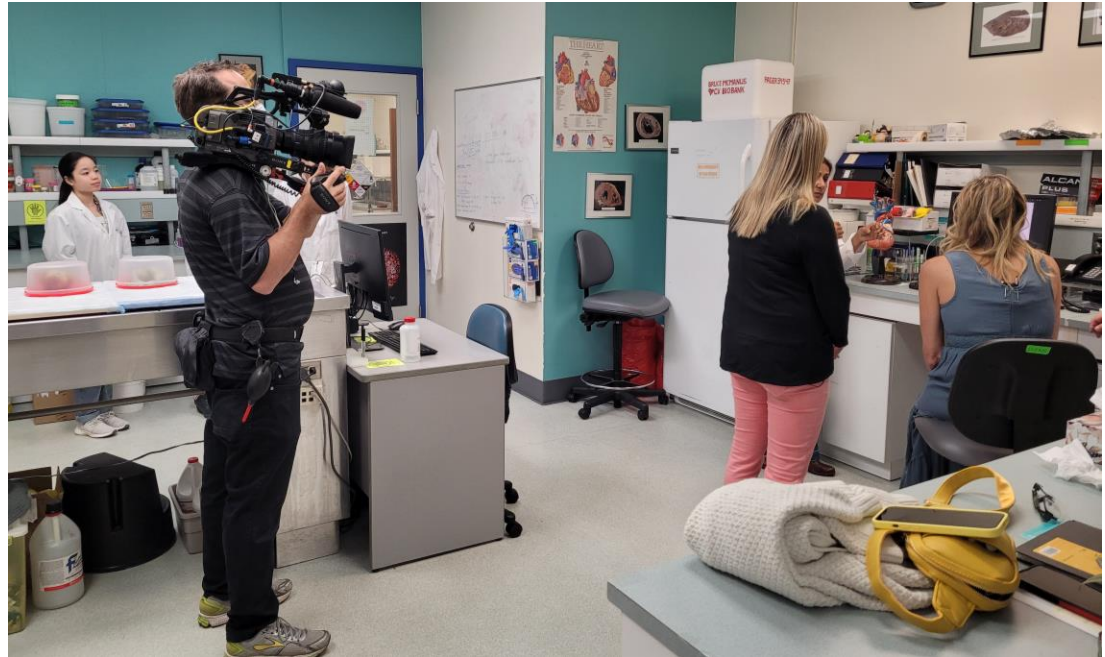


“Transplant” Documentary

Spring 2024



**KNOWLEDGE
NETWORK**



Heart Transplant patient visiting her heart in BMCB



Congrats Kasia !

*Welcome to
our newest
HLI member*



*Baby Paul Adolphs
Born Monday June 12th
3.6 kg and 53 cm long*



Congrats to Paloma Burns (PROOF)

Baby boy Koen

Born June 6th 2023



Congrats to Dr. Alan Rabinowitz (HLI Associate Member)

Born on Feb 15th
2023

Baby girl
Rabinowitz is
celebrating 4
months of age with
her sister



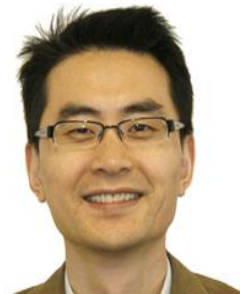
Congrats to Gurpreet and Bob

Her son Jashanjot's graduated with a Bachelor in Business Administration – Business Mgmt with distinction



HLI Day – Celebrating 46 years

Save the date Friday Sep 22 23 n the
Cullen Theatre SPH



Health & Safety Education Events



Health & Safety

- May 31 –Transportation of Dangerous Goods (TDG) Training Complete – 21 participants
- Fume hood recertification – Coming soon
- Safety Day – under construction
- N95 Fit Testing on site – Contact Ivan Leversage
- It is mandatory for all new hires (students and staff) to attend an HLI Orientation session. We do not accept volunteers due to liability issues



Health & Safety

- Chemical Waste Disposal -Feb 23– 515 Kg of waste chemicals disposed this is a reduction of 26 kg (541) from Feb 22
- Having a ‘partner’ is required when you transport large liquid nitrogen containers between floors
- N95 Fit Testing – Contact Ivan Leversage ivan.leversage@hli.ubc.ca
- It is mandatory for all new hires (students and staff) to attend an HLI Orientation session. We do not accept volunteers due to liability issues
- Coming Soon June 23–Transport of Dangerous Goods (TDG) Training



Health & Safety

- **Appropriate Summer Clothing in Research Facilities**
 - Minimum requirements for PPE in a wet lab include:
 - Fully covered, liquid resistant footwear
 - Long loose fitting pants
 - Buttoned lab coat with the sleeves rolled down
- **Suggestions to offset the higher temperature:**
 - Frequent breaks
 - Lighter weight garments
 - Alternative working hours

Education Update

- **RIP Seminar Q1 2023** - 323 attendees – 8 sessions (avg attendance - 41)
- **Friday Seminar Series Q1 2023** - 271 attendees – 5 sessions (avg attendance - 55)
- **HLI Friday Seminar Funding Request** – Thank you to all who have contributed, have raised **\$8000** to date
- **PATH MEDI 570** – Final exam in person April 26
- **PATH 521** – Under construction (starts June 6)
- **HLI High School Student Week (Spring)** – April 17-21

WHAT NOT TO WEAR in the lab this summer



Education

- **PATH 521- Introduction to the Pathogenesis of Human Disease** now underway- please encourage your Summer Students to attend
- **PATH 518/MEDI 560 – Pulmonary Pathophysiology** – under construction
- **Summer Student RIP's** – starts June 26th
- **Research in Progress** – Fall session begins September 11th
- **HLI Friday Seminar Series** – Fall session begins September 15th - 5 spots are available for Fall 2023
- **Trainee Research Day** – August 18th
- **Shiga University Medical Sciences Summer Exchange Students**
(SUMS 2023) 2 students August 14th – September 8th

Douglas College Visit April 13, 2023



High School Students April 17-21st



HLI Summer Student – Lunch and Learn Seminars for 2023



Starting June 28, 2023
Wednesdays 12pm – 1pm
James Hogg Conference Centre

- June 26th – Summer Student Research in Progress (SSRIP) starts
- June 28th – Abstract Writing Workshop – Dr’s Vivienne Chan & Evan Phillips
- July 5th– Giving an Effective Oral Presentation – Dr. Stephanie Sellars
- July 12th – EDI Seminar
- July 19th – Scientific Poster Presentation – Dr. Pascal Bernatchez
- July 26th – How to Publish Papers – Dr. Tillie Hackett
- August 18th – HLI Research Day



BMCB Update

- Ethics
- Partnership (HeartLife Foundation)
- **45** new patients consented for future donation
- **139** new patient cases (5 explanted hearts), **315** samples biobanked (150 surgical + 165 explanted hearts)
- **306** samples loaned out to **8** end users (195 myocardium, 58 coronary arteries, and 53 valves)
- **83** cases of chart review
- Created basic digital inventory for more than **2500** samples (9 years)
- BMCB tours
 - ✓ 4 patient heart viewing session
 - ✓ 4 Biobank tours (Cardiac surgeon/ residents tour & SPH foundation)





HLI Trainee Association

Naomi Potter



Research Day 2023!



Save the date: **Friday August 18th** @ St. Paul's Hospital

Important deadlines:

- Summer student abstract draft: Monday July 3rd
- Registration: Monday July 17th
- Abstract: Monday July 24th

Highlights:

- Trainee presentations, posters, KT elevator pitches
- Guest speakers:
 - Dr. Jennifer Gardy
 - Dr. Karen Cheung



Biostats Workshop

- 2-day workshop held in June
- Attendees?
- Baseline & follow-up questionnaire to evaluate success
- 30 participants 😊



Centre for
Heart Lung Innovation
UBC and St. Paul's Hospital

Trainee Association at HLI (TAHLI) present:

BIOINFORMATICS BOOTCAMP

INTRODUCTION TO R STUDIO AND STATISTICS

Learn:

- How to use RStudio
- Descriptive Statistics
- Statistical Tests
- Visualization of Data

June 13th - 15th 2023

In Person at St Paul's Hospital and online via Zoom

Scan the QR code or sign up **here:** shorturl.at/inADN



More information: linda.lapp@hli.ubc.ca

Events

Rock the boat!



Toastmasters: 25 attendees

Book drive!





Scholarship and Peer Review Committee

Trainees: come work with our grants team!

- July 18th: CGS-D and Vanier workshop
- August 1st: CGS-D and Vanier peer review session



Get involved!



All trainees are welcome (undergrad, graduate, postdoc)

Facebook: Trainee Association at HLI



Instagram: [ubc.tahli](https://www.instagram.com/ubc.tahli)



HLI EDI Committee

Introductions and Updates



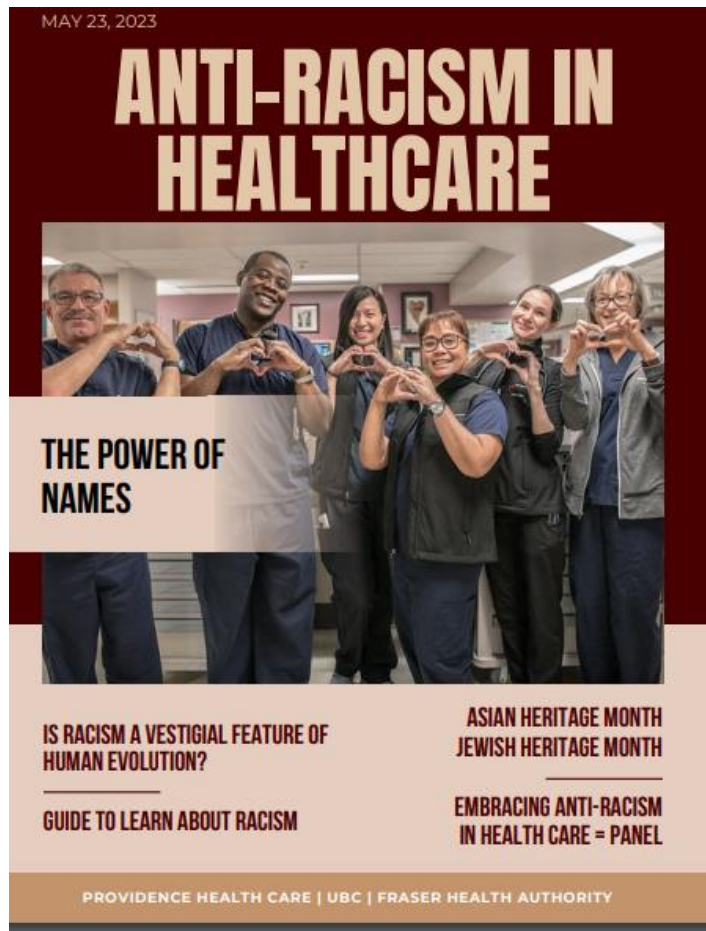
EDI Committee

Events held Last Quarter:

- ❖ March 15th - Respectful Environments and Upstander Engagement (*Robyn Campol*)
- ❖ May 16th - Creating Inclusive Spaces (*Dr. Neila Miled*)
- ❖ *Documentary screening: British Columbia: An Untold History (Knowledge Network)*



EDI Committee: Magazine Feature



Scan here to read:



EDI Committee: Upcoming Events

SAVE THE DATES:

- ❖ July 12th 12-1:30PM: REDI Seminar Series #5: We Haven't Even Begun the Conversation with Derek Thompson
- ❖ September 11th 12-1:30PM: It's Not Knowledge We Lack: Edifying Cultural Safety, Humility and Humanity by Derek Thompson



We would like your input on catering!

- ▶ Please share your catering suggestions with us for EDI and other centre events.
- ▶ We would like to support local restaurants and equity-deserving business owners



Grants and Awards

March 13, 2022 to June 19, 2023

PI Grants and Awards

NSERC Discovery Grant



Amrit Singh

Integrative methods for single cell multiomics

\$175,000



Ilker Hacıhaliloğlu

On-Device continual learning methods for point of care ultrasound

\$210,000



PI Grants and Awards



Zachary Laksman

Stem Cell Network – Impact Award

Development of high-throughput assays to stratify cardiotoxic drug risk by sex and genotype

\$250,000

St. Paul's Hospital Faculty Research Award



Scott Tebbutt

UBC Health Innovation Funding Investment (HIFI) Award

Plasma metabolomic biomarkers for detecting heart allograft acute rejection

\$25,000



PI Grants and Awards

Mari DeMarco

Ministry of Health

A blood test for Alzheimer's disease

\$50,000

CIHR/CCNA Knowledge Translation and Exchange Program

On-demand continuing medical education on Alzheimer's CSF biomarkers

\$10,000

CIHR Catalyst Grant (co-applicant)

*Cognitive aging in middle and older-aged Canadians:
Consideration of genetic risk, modifiable factors, and
biological sex*

\$68,970



PI Grants and Awards



Ying Wang

(co-PI: Joshua Dubland; Collaborators: Amrit Singh, Bojana Rakic, Daniel Holmes)

Precision Health Catalyst Grant

Who will benefit from colchicine to reduce heart attacks? – Characterizing the baseline inflammation status of patients with coronary atherosclerosis

\$50,000

**Department of Pathology and Laboratory Medicine –
2022-2023 Research and Discovery Award**



PI Grants and Awards



Stephanie Sellers

**Heart Research UK (co-applicant; PI: Ruth Andrew,
University of Edinburgh)**

Lp(a) and Plaque Vulnerability

\$420,000

**Department of Medicine Martin Hoffman Award of
Excellence in Research**



Kelly McNagny

Canadian Society for Immunology Investigator Award



PI Grants and Awards

Honglin Luo

Heart and Stroke Foundation Grant-in-Aid

Innate immune mechanisms of viral myocarditis

\$297,500; approved but declined

CFI Innovation Fund (Co-Project Leader)

Transformative and Disruptive Systems Immunology

\$2,491,654

**2023 Distinguished Achievement Award – Excellence in
Basic Science in Research**



Congratulations!



Jordan Guenette

**Promoted to Professor, Department of
Physical Therapy**



Trainee Grants and Awards

CIHR CGS-D (\$105,000)



Hacina Gill (Sellers)

Investigation of Fibrosis-Mediated Structural Valve Degeneration: Unveiling the Nature of Bioprosthetic Heart Valve Fibrosis and Its Contribution to Bioprosthetic Heart Valve Failure



Aileen Hsieh (Hackett)

The Role of Small Airways Disease Heterogeneity in Asthma



Trainee Grants and Awards



Olivia Ferguson (Guenette)

Governor General's Gold Medal – Masters



Abhinav Checkervarty (Tebbutt)

Mitacs Accelerate

Tissue-constructs to predict optimal vaccine response in neonates

\$15,000



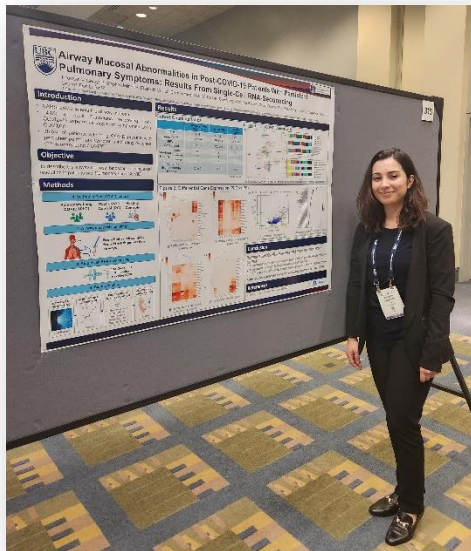
Trainee Grants and Awards



Tony Guo (Dorscheid)

**CIHR- Canada Graduate Scholarship-
Master's (CGS M) Program**

\$17,500 CAD



Firoozeh Gereyeli (Sin)

ATS Respiratory Structure and Function Assembly

Abstract Scholarship

\$650 USD



TEAM PLAYER OF THE QUARTER

**This quarter we had a unanimous nomination for a team
Here are some comments from the winner's nominees**

This group is made of staff and students who need to multitask to meet the needs of different research projects. Their work include patient consenting, archiving about 50 different types of samples, coordinating with different sample users and three Departments at SPH, and increasing the visibility of cardiovascular research at the HLI. They are still learning to be an expert but are committed to handle the details behind the scene to support as many as they can.

Happy to vote for the hardworking team at BMCB.

I want to nominate the BMCB staff and students for their hard work, some of which are not obvious to individual biobank users because of the huge workload and changes we have to make behind the scene



TEAM PLAYER OF THE QUARTER WINNER



Wendy Liang



Tiffany Chang



Gurpreet Singhera Coco Ng

Winner will receive a \$50 gift card (of your choice)
Let Claire know your preference (ideally e-card)



Next Quarterly Meeting
Summer QM
Sep 18TH 2023
9-10 am

Stay tuned for more news of 'HLI Day' planned for
Sep 22nd 2023 (separate from Trainee Research Day)

